Labour Market Intelligence: Refresh – 2023

The Electrotechnical Skills Partnership

Snapshot report for Yorkshire and the Humber

May 2023

Pye Tait Consulting
info@pyetait.com
www.pyetait.com

Cert No: QEC19593371/0/Q

A report prepared by:

Pye Tait Consulting
Registered in England, Company No: 04001365, VAT No: 755 8312 14
Postal address: Royal House, 110 Station Parade, Harrogate, North Yorkshire, HG1 1EP
Tel: 01423 509 433
Registered office address: 5 Merus Court, Meridian Business Park, Leicester, LE19 1RJ

email (enquiries related to this report): n.charleton@pyetait.com
email (general enquiries): info@pyetait.com
website: www.pyetait.com

Pye Tait Consulting is part of the EMB-Group.

Contents

1. Introduction

1.1 Background

The Electrotechnical Skills Partnership (TESP) commissioned Pye Tait Consulting, an independent research agency, to refresh labour market intelligence (LMI) that was undertaken in 2018/19 (with some additions in 2020 via a mini-LMI study) to understand the current skills requirements to work within the electrotechnical sector. The main report from 2018/19 provided a detailed overview of the electrotechnical sector, its workforce, skills needs, and the training and development typically undertaken.[1]

The electrotechnical sector continues to be at the forefront of a rapidly-evolving revolution in how we use technology – with increased demand for digital communication, energy conservation, electric vehicle charging, and renewable energy solutions with a particular focus on the electrification of heat (such as heat pumps) in buildings. The underlying driver for most of this development is the Net Zero agenda.

The overarching aim of this research is to update the previous LMI work to ensure accurate and up-to-date intelligence, building upon 2018/19 and 2020 research findings. The findings will provide TESP with renewed/up-to-date data that can be used to inform the development or update of a future labour force strategy.

1.2 Methodology

The study involved three core strands of research:

- desk research,
- a telephone survey of 467 employers, and
- follow-up interviews with 12 employers.

The survey questionnaire was designed to be similar to that used in 2018/19 and 2020 to enable longitudinal comparison.

1.3 About this report

The major output from this study is a UK-level report that outlines trends in the sector over the past few years. It provides a detailed insight into the state of the electrotechnical sector in terms of its workforce size, demography, and skills needs/challenges.

In addition, a series of twelve regional reports (one per English region and per devolved nation) will succinctly present the key findings from the research for TESP's regional managers to take forward in their work. This is the report for Yorkshire and the Humber.

[1] TESP, 2019, Labour market intelligence research

The findings contained in this report are derived from the telephone survey of employers. Of the 467 total respondents, 37 are based in Yorkshire and the Humber.

Findings are based on a small sample of businesses in the region, resulting in a larger margin of error than the main report, meaning findings should not be interpreted quantitatively as being necessarily representative of the region. From a qualitative standpoint the results will, however, be valuable indications of the local situation.

Note that charts and tables presented in this report may not sum to 100% due to rounding.

1.4 Respondent profile

Around half (19, 51%) are micro firms employing fewer than 10 staff, just under one third are small firms (12, 32%) with 10 to 49 staff, and the remainder (six, 16%) are medium firms employing between 50 and 249 staff. The average (mean) size of company in terms of staff is 19, while the most common (modal) size is two staff. These figures include both PAYE direct staff and 'others' such as self-employed. Discounting the latter group, the average (mean) size is 17, and the most common (modal) size is five.

The age spread of workers in Yorkshire and the Humber is shifted slightly towards the youngest group and the 50 to 64 year olds compared to the UK as a whole – see Table 1.

Table 1 Age profile of respondents: UK and Yorkshire and the Humber

Age	UK-wide	Yorkshire and the Humber
16 to 18	6%	9%
19 to 24	14%	14%
25 to 49	50%	44%
50 to 64	26%	30%
65+	4%	2%

Base: 467 (UK) and 37 (Yorkshire and the Humber) respondents. Source: Pye Tait Consulting 2023.

The workforce of surveyed respondents in the region is reported by respondents as being 100% UK citizens – a similar profile to the UK as a whole, though without a small percent of EU (Irish and non-Irish) citizens.

Over five in six (86%) undertake new fit commercial work, and over three quarters (78%) undertake commercial repair and maintenance work. Around two fifths work in the domestic sector – new fit (46%) and repair (41%).

From a list of pre-defined activities, surveyed respondents most commonly undertake low voltage electrical installation (81%) or low voltage maintenance and repair work (78%). The next most common activities are fire detection and alarm systems (51%) and emergency lighting systems (49%).

1.5 Sector size

ONS SOC code data indicate there are 27,700 individuals (conf %: 6,500) working in the region in the SOC2020 code 5241: Electricians and electrical fitters.[2] However, it should be noted that ONS has identified an issue in the collection of occupation data affecting the accuracy of some detailed occupations and the data derived from the them, and urge caution in interpreting data. Nevertheless, based on an estimated proportion of those with electrotechnical skills who may operate at different skill levels, the overall total of electrotechnical-skilled workers in the region is 35,700 ± 6,500.

Further detail and considerations for how these figures are derived are outlined in the accompanying UK-wide report.

[2] Annual Population Survey, ONS, Jan to Dec 2022. Conf is presented as the standard error as a percentage of the figure.

2. Recruitment

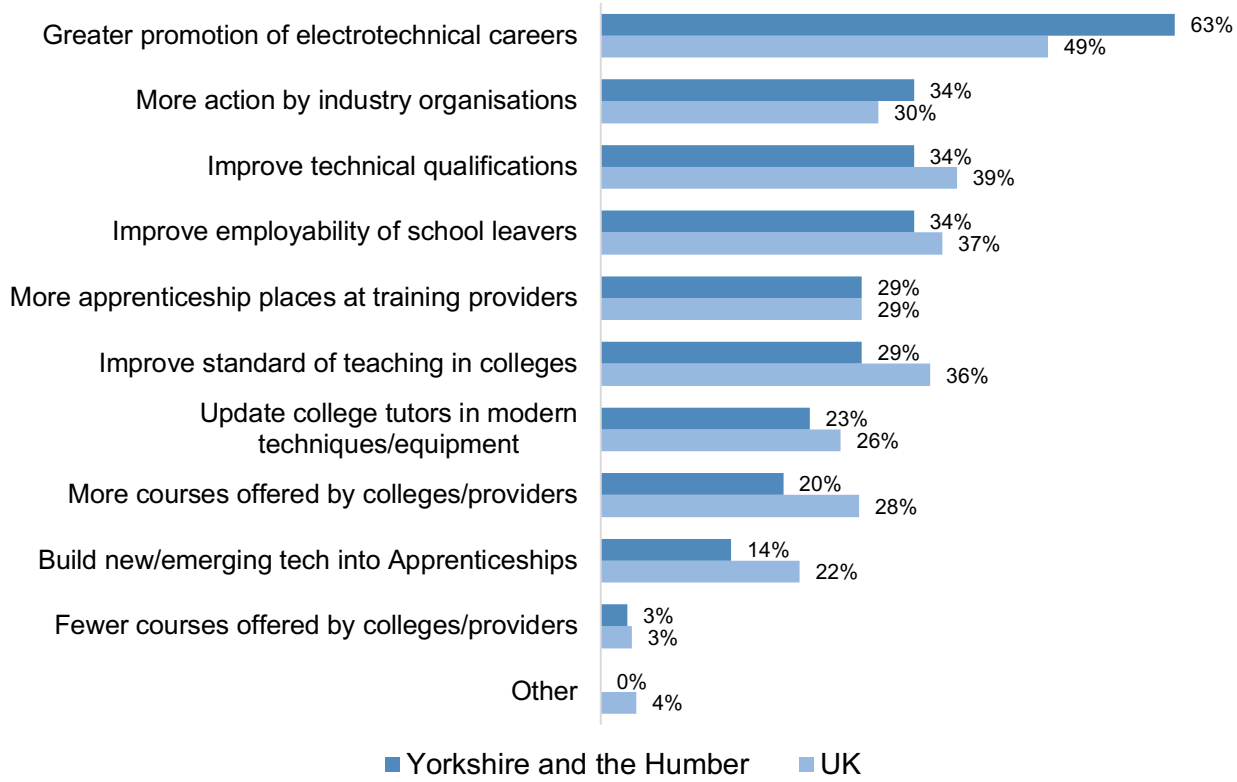
Surveyed employers most commonly report advertising to recruit skilled workers and apprentices over the past 12 months (23 roles advertised for both), followed by unskilled workers and directors and managers (two for both). Of these, employers say over five in six (87%) skilled roles were hard to fill, as were just under half (48%) of apprentice/trainee roles.

In terms of the employment basis, as compared to pre-COVID-19, around half of employers (51%) are 'more likely' to recruit using a PAYE directly employed approach or to hire apprentices (50%), while over half are neither more nor less like to loan labour between companies (59%) or use an employment agency (56%).

The main perceived actions required to tackle recruitment problems and skills shortages in the region include (see Figure 1):

- greater promotion of electrotechnical careers (mentioned by 63% vs 49% in UK as a whole), and
- more action by industry organisations (34% vs 30%), and
- improving technical qualifications (34% vs 39%), and
- improving employability of school leavers (34% vs 37%).

Figure 1 Perceived actions required to tackle recruitment problems – UK vs Yorkshire and the Humber



Base: 441 (UK) and 35 (Yorkshire and the Humber) respondents (multiple responses permitted).
Source: Pye Tait Consulting 2023.

3. Skills needs of the electrotechnical sector

3.1 Electrotechnical qualifications

Respondents in Yorkshire and the Humber have a more optimistic view of training and preparedness of job applicants compared to the UK as a whole, and a similar view of qualifications to the UK as a whole – see Table 2.

Table 2 Views on qualifications – agreement levels UK wide and Yorkshire and the Humber

	UK-wide	Yorkshire and the Humber
Job applicants typically have the skills we require of them to do the job well	58%	69%
Currently available qualifications fully reflect the demands of the job today	59%	60%
We are able to find suitable training in our area when we need it	69%	84%

Base variable: 460 to 462 (UK) and 36 to 37 (Yorkshire and the Humber) respondents. Source: Pye Tait Consulting 2023.

3.2 Current and future skills needs

Employers were asked to comment on their business's current and future demand for a variety of technical skills. The results for the UK as a whole, and for Yorkshire and the Humber are presented in Table 3. It should be noted that, for the two sets of 'current demand' columns, three options were available to respondents ('not needed right now', 'needed and we have this skill', and 'needed but we don't' have in the business'), but that the 'not needed right now' responses are omitted for clarity.

A discussion of the findings is presented in the main UK-wide report.

Table 3 Current and future demand for technical skills – UK vs Yorkshire and the Humber

Skill	Current demand – UK-wide		Current demand – Yorkshire & Humber		Needed in 3 years – UK-wide	Needed in 3 years – Yorkshire & Humber
	Needed and have skill	Needed but don't have skill	Needed and have skill	Needed but don't have skill		
Building Automatic Control Systems (BACS) design, installation & maintenance	16%	0.6%	21%	3%	20%	31%
Direct electrical heating systems (e.g. storage heaters, UFH) design and installation	23%	0.6%	35%	3%	38%	45%
Electric vehicle charging equipment (EVCE) installation	34%	2%	35%	-	39%	45%
Electrical - High Voltage	35%	2%	53%	-	37%	52%
Electrical - Low Voltage	89%	1%	89%	-	88%	91%
Electrical Design	67%	2%	76%	-	69%	72%
Electrical Energy Storage Systems (EESS) design / installation	31%	2%	41%	-	39%	55%
Emergency lighting, installation & servicing	63%	0.5%	81%	-	64%	77%
Energy efficiency services including lighting and lamp replacement services, power factor correction etc.	45%	0.6%	59%	-	47%	45%
Fire detection and alarm system installation and servicing	51%	0.5%	65%	-	52%	59%
Heat pump installation and design	25%	2%	26%	-	31%	38%
Installation & maintenance of temporary and stand-by generator sets	28%	1%	30%	-	30%	36%
Installation of technologies associated with Smart-Buildings	20%	3%	19%	4%	36%	37%
Installation, servicing & maintenance of security systems including intruder/controlled access and CCTV	46%	0.8%	62%	3%	44%	65%

Lighting systems installation & maintenance including Highway and Street lighting	47%	0.6%	63%	-	49%	64%
Lightning protection systems design & installation	46%	0.9%	48%	4%	50%	57%
Renewable energy systems design & installation	32%	6%	37%	7%	44%	47%

Employers were asked a similar question in relation to their current and future demand for a variety of generic skills. The results for the UK as a whole, and for Yorkshire and the Humber are presented in Table 4. It should be noted that, for the two sets of 'current demand' columns, three options were available to respondents ('not needed right now', 'needed and we have this skill', and 'needed but we don't' have in the business'), but that the 'not needed right now' responses are omitted for clarity.

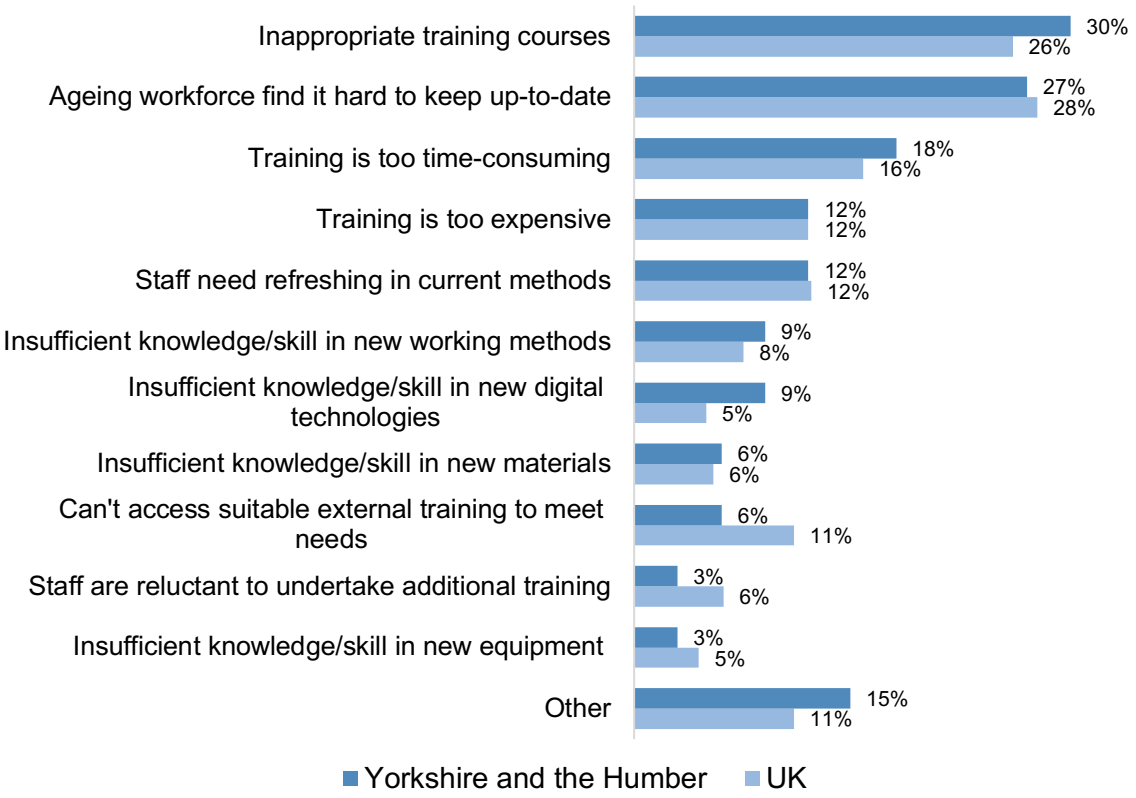
Table 4 Current and future demand for generic skills – UK vs Yorkshire and the Humber

Skill	Current demand – UK-wide		Current demand – Yorkshire & Humber		Needed in 3 years – UK-wide	Needed in 3 years – Yorks & Humber
	Needed and have skill	Needed but don't have skill	Needed and have skill	Needed but don't have skill		
Management and leadership	97%	0.4%	97%	-	93%	100%
Maths	96%	-	97%	-	93%	97%
Problem solving	97%	0.4%	97%	-	94%	100%
Project and time management	95%	0.7%	94%	-	93%	100%
Spoken English	97%	-	97%	-	94%	100%
Team working and communication	98%	0.2%	100%	-	94%	100%
Written English	98%	-	100%	-	94%	100%
Client engagement	94%	2%	100%	-	93%	100%
Digital literacy (e.g. using the cloud / other platforms)	78%	7%	89%	-	94%	88%

The main perceived reasons for skills deficiencies in the region include (see Figure 2):

- inappropriate training courses (mentioned by 30% vs 26% in UK as a whole), and
- ageing workforce experience difficulties keeping up-to-date (27% vs 28%).

Figure 2 Perceived reasons for skills deficiencies



Base: 422 (UK) and 33 (Yorkshire and the Humber) respondents (multiple responses permitted).
Source: Pye Tait Consulting 2023.

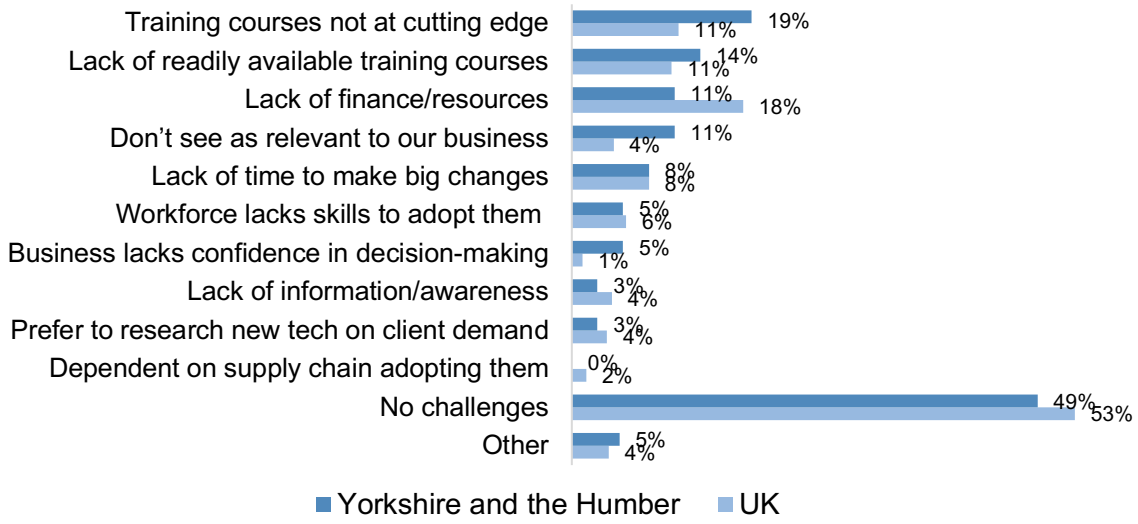
4. Future of the electrotechnical sector

4.1 Take-up of technology

The main perceived issues that organisations in the region face in adopting new technologies and processes include (see Figure 3):

- training courses not at the cutting edge of the industry (mentioned by 19% vs 11% in UK as a whole), and
- a lack of readily available training courses (14% vs 11%).

Figure 3 Perceived challenges in adopting new technologies - UK vs Yorkshire



Base: 456 (UK) and 33 (Yorkshire and the Humber) respondents (multiple responses permitted).
Source: Pye Tait Consulting 2023.

There appears to be a similar level of concern in Yorkshire and the Humber compared to the wider UK, still at a substantial level, that sector-wide take-up of new technology and processes is relatively modest (39% agree or strongly agree, vs 40% in UK) – Table 5.

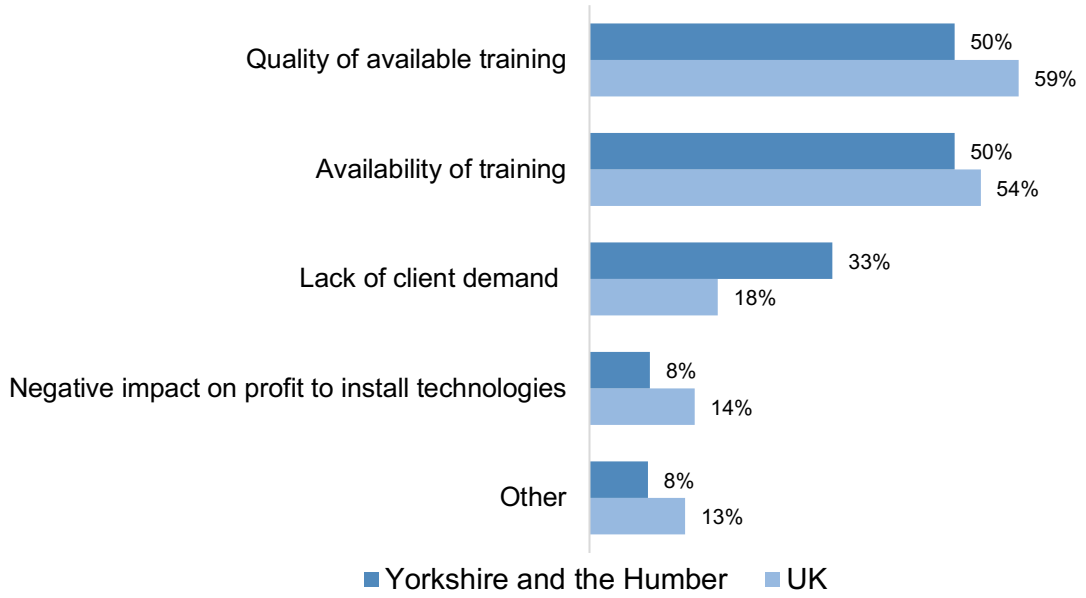
Table 5 Sector-wide take-up of new technology is relatively modest – UK vs Yorkshire

	UK-wide	Yorkshire and the Humber
Strongly agree	9%	13%
Agree	31%	26%
Disagree	60%	61%
Strongly disagree	0.5%	-

Base: 399 (UK) and 31 (Yorkshire and the Humber) respondents. Source: Pye Tait Consulting 2023.

Those agreeing or strongly agreeing were asked why they believe take-up has been relatively modest. Reasons generally reflect those of the wider UK, although there is a more common perception of a lack of client demand (33% vs 18% of UK) – Figure 4.

Figure 4 Perceived reasons for modest take-up of technology – UK vs Yorkshire and the Humber



Base: 153 (UK) and 12 (Yorkshire and the Humber) respondents (multiple responses permitted).
Source: Pye Tait Consulting 2023.

4.2 Workforce projection

Companies anticipate that, in five years' time, they will employ a slightly higher average of staff – 21 staff (compared to 19 now). This includes both PAYE direct staff and 'others' such as self-employed. Discounting the latter group, the future average (mean) size is anticipated to be 19 (compared to 17 now), indicating a slight expansion in company size anticipated in the future for the region.

Compared to the UK as a whole, anticipated demand for personnel in the region in the next two to three years is higher for design engineers and estimators, apprentices, electrical labourers, and fire and security system installers, and lower for project supporting roles – see Table 6. While most surveyed employers believe demand will remain steady, a greater proportion believe demand will increase than decrease over the coming years for all roles.

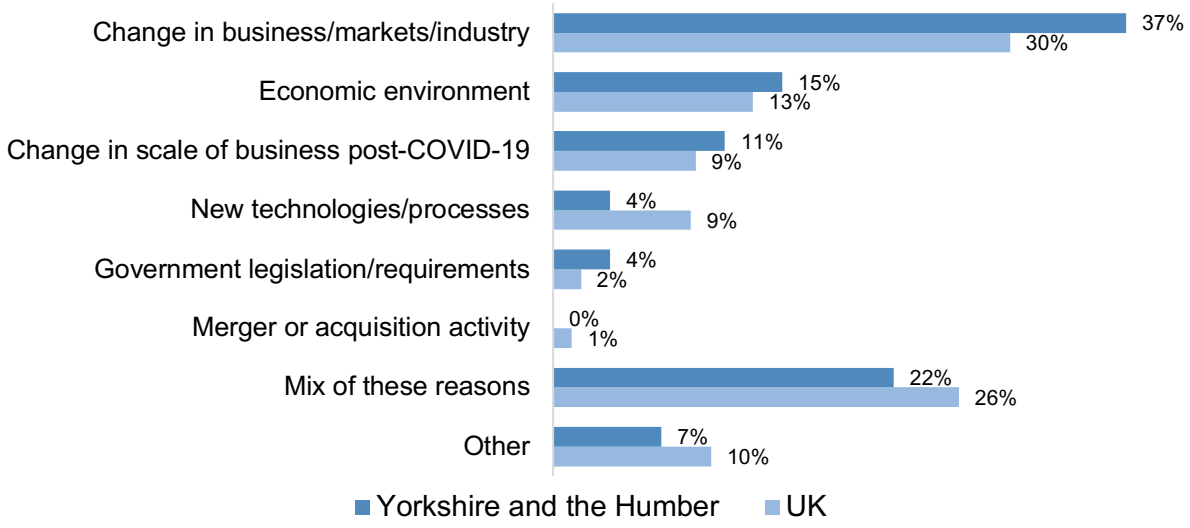
Table 6 Anticipated demand for personnel change – UK vs Yorkshire and the Humber

		Decrease	Remain the same	Increase
Managers and supervisors	UK-wide	4%	88%	8%
	Yorkshire & Humber	-	92%	8%
Design engineers and estimators	UK-wide	5%	81%	14%
	Yorkshire & Humber	-	83%	17%
Qualified electricians	UK-wide	5%	41%	54%
	Yorkshire & Humber	-	46%	54%
Apprentices	UK-wide	6%	45%	49%
	Yorkshire & Humber	3%	44%	53%
Project supporting roles	UK-wide	5%	82%	13%
	Yorkshire & Humber	-	91%	9%
Fire and security system installers	UK-wide	7%	82%	11%
	Yorkshire & Humber	-	79%	21%
Electrical labourers	UK-wide	5%	64%	31%
	Yorkshire & Humber	-	63%	38%

Base variable: 390 to 452 (UK), 32 to 37 (Yorkshire & Humber) respondents. Source: Pye Tait Consulting 2023.

Respondents foreseeing an increase or decrease in demand for any role were asked for the main reason for this change. Responses generally reflect those provided at a UK-wide level, with a greater proportion of those who see change in business/markets/industry as the main reason (37% vs 30% for the UK) – see Figure 5.

Figure 5 Main reason for change in demand – UK vs Yorkshire and the Humber



Base: 325 (UK) and 27 (Yorkshire and the Humber) respondents. Source: Pye Tait Consulting 2023.

Compared to the UK as a whole, anticipated demand for personnel in the region in the next three years as a direct result of new technologies and processes is higher for supervisors, apprentices, skilled and unskilled workers, and lower for directors and managers and project personnel – see Table 7.

Table 7 Anticipated demand for job roles as a direct result of new technologies – UK vs Yorkshire and the Humber

		Decrease	Remain the same	Increase
Directors and managers	UK-wide	5%	89%	7%
	Yorkshire & Humber	3%	94%	3%
Supervisors	UK-wide	5%	83%	12%
	Yorkshire & Humber	3%	82%	15%
Project personnel	UK-wide	5%	76%	19%
	Yorkshire & Humber	3%	81%	16%
Skilled e.g. qualified electricians	UK-wide	6%	41%	53%
	Yorkshire & Humber	3%	37%	60%
Unskilled e.g. labourer	UK-wide	6%	60%	33%
	Yorkshire & Humber	3%	53%	44%
Apprentices/trainees	UK-wide	8%	44%	47%
	Yorkshire & Humber	9%	38%	53%

Base variable: 396 to 442 (UK), 32 to 35 (Yorkshire & Humber) respondents. Source: Pye Tait Consulting 2023.